

Appendix B
Arborist Report

ARBORIST REPORT-
Tree Survey & Construction Impact Assessment

125 Kirk Avenue

APN: 601-07-066

San Jose

12/7/2021

Prepared for:

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SUMMARY

This report provides the following information:

1. A summary of the health and structural condition of 58 trees.
 2. A preliminary evaluation of anticipated construction impacts to the trees.
 3. Recommendations for retention or removal of assessed trees based on their condition and anticipated construction impacts.
 4. A tree protection plan.
- The *Tree Assessment Chart*, Appendix A is the condensed reference guide to inform all tree management decisions for the trees evaluated.
 - A subdivision is proposed for an existing parcel. Eighteen new homes are proposed.
 - Fifty-eight trees within or near the project limits were surveyed.
 - Thirty-four trees are “ordinance size” trees.
 - Most trees will be highly impacted, and their removal is recommended to accommodate the project.
 - Depending on final placement of grading stakes, twelve trees, (8 ordinance size), may be retained.
 - Replacement tree(s) will be required for trees approved for removal.

Background

Plans will be submitted to the City of San Jose Planning Department, for construction of seventeen new homes at 125 Kirk Avenue. Ms. Fanyu Zhou, Project Manager at TDDGUS Design Group requested my services, to assess the condition of fifty-eight trees within or near the project limits and the construction impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of San Jose planning requirements.

Assignment

Provide an arborist report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy diameter spread), condition (health and structure), and suitability for preservation ratings.

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees.
- **Plan Review: Reviewed provided plans including:** Site Development Plan, Sheet A.1 for 125 Kirk Avenue, San Jose, by TDDG, dated 11/16/2021.
- **Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts, to provide recommendations for removal or retention of trees.
- **Mapping:** 1. Tree locations and canopies were plotted to create a *Tree Location Map*, Sheet T1.
2. Tree locations were plotted onto: Site Development Plan, Sheet A.1, by TDDG, and a Tree Protection Plan, Sheet T2 was created.

Limits of the Assignment

The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection on 9/20/2021.

The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the City of San Jose as a reference for existing tree conditions and to help satisfy the City of San Jose planning requirements.

Resources

All information within this report is based on site plans as of the date of this report.

Resources are as follows:

- *Site Development Plan*, Sheet A.1, by TDDG, dated 11/16/2021.
- Site Visit, Tree Inventory & Condition Evaluation on 9/20/2021, at 125 Kirk Avenue
- City of San Jose Municipal Code – City of San Jose – Chapter 13.28 *Street Trees, Hedges and Shrubs*, (Applicable sections), & Chapter 13.32 – *Tree Removal Controls*, (Applicable sections).

OBSERVATIONS

The parcel has a flat grade. I surveyed fifty-eight trees, represented by 12 different species. All trees 3 inches in diameter or greater were surveyed. Thirty-four trees were “ordinance size” trees and are regulated by City of San Jose ordinance. An “ordinance size” tree is any tree 12 inches or greater in diameter measured at 4.5 feet above grade. A multi-trunk tree is “ordinance size”, if the combined measurement of all trunks is equal to, or greater than 12-inches in diameter.

From Kirk Avenue, a driveway leads to the back half of the lot. This is where most of the trees surveyed are located. Two trees grow along the driveway starting at Kirk Avenue and ending in the back lot, (Image #1)



Image #1 – Trees T1, southern magnolia T2, Italian cypress, growing along access driveway, as seen from Kirk Avenue.

Both the magnolia and the Italian cypress are mature trees in good condition.

Most trees were clustered around the perimeter of the rectangular shaped gravel lot, (Image #2).



Image #2, overhead view of back lot where most trees are located. Property boundary in red is approximate. Most trees are oak species. The blue rectangle indicates the area planted as a fruit tree orchard.

The property is bordered by single-family homes on three sides and apartments on one side.

Most trees surveyed were oaks. Of the fifty-eight trees surveyed, thirty are coast live oak, and five are valley oak.

There were four plum, three glossy privet and three walnut trees. The rest of the species were represented by one or two trees.

One section of the lot was planted with fruit trees, as shown in image #2.

Two large, mature Italian cypress grow where the access driveway from Kirk Avenue meets the back lot, (Image #3).



Image #3- Trees T2 & T3, Italian cypress.

The two cypress are in good condition.

The oaks and other species were growing in tight groups of trees. The growing conditions were crowded resulting in poor growth structure for many trees, particularly the smaller ones.

Some of the larger oaks, for example tree T107, had good structure, (Image #4).



Image #4- Tree T107, coast live oak, (circled). Tree T106, plum is seen growing to the left of oak.

Coast live oak T107 was in good condition and had co-dominant trunks of 24-inches and 20-inches.

Coast live oak T122, 40" & 24" diameter, is another larger, mature live oak growing at the southern (rear) end of the lot, (Image #5).



Image #5 Tree T122, coast live oak. Oak grows towards the (southern), rear end of property.

The large, mature coast live oak is in good condition.

The five valley oaks were all mature specimens, (Image #6)



Image #6 – Tree T139, valley oak. This oak is in fair to poor health as evidenced by significant tip dieback that is not discernable in image.

Three of the valley oaks were in poor condition. All appear to be drought stressed as evidenced significant tip dieback. Some were in crowded growing conditions and had thin canopy densities as a result.

At the northern (front) end of the back lot a orchard of fruit trees grows, (Image #7).



Image #7 – Trees T150 – T156, fruit trees.

Fruit trees in the orchard include plum , persimmon, apricot, fig and citrus. Some of the fruit trees are “ordinance size”. The fruit trees are in good or fair condition, except two plums (one “ordinance size”), are in poor condition.

Three coast live oak and two glossy privet growing at the west edge of the property have canopies that overhang the adjacent property. These five trees are mature specimens, and have canopies that overhang between five to fifteen feet into adjacent properties.

In summary, most of the 38 “ordinance size” trees surveyed, (30 total), are in good or fair condition. Eight of the “ordinance sized” trees are in poor condition.

DISCUSSION

Species List - Protected Trees

TOTAL SUBJECT TREES: 34 Trees

14	coast live oak	(<i>Quercus agrifolia</i>)
4	valley oak	(<i>Quercus lobata</i>)
3	plum	(<i>Prunus spp.</i>)
2	Italian cypress	(<i>Cupressus sempervirens</i>)
2	walnut	(<i>Julgans spp.</i>)
2	glossy privet	(<i>Ligustrum lucidum</i>)
1	magnolia	(<i>Magnolia gradiflora</i>)
1	fan palm	(<i>Washingtonia spp.</i>)
1	apricot	(<i>Prunus spp.</i>)
1	fig	(<i>Ficus carica</i>)
3	unidentified species (dead)	

A complete list of trees is in Appendix A – Tree Assessment Chart.

Tree Evaluation and Recording Methods

Site evaluations were made on 9/20/2021. *The inventory included all trees within the project limits.* The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded. The recorded data is included in the *Tree Assessment Chart, Appendix A*, of this report. Detailed criteria for each assessment rating category are included in Appendix B – *Criteria for Tree Assessment Chart.*

Condition Rating - Protected Trees

A trees condition is determined by an assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating

- Good - 7
- Fair - 19
- Poor - 8

Suitability for Preservation - Protected Trees

A trees suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating

- Good - 10
- Fair – 16
- Poor - 8

Eight “ordinance size” trees are in poor condition and are not suitable for retention in the project based on their condition.

Tree Protection Zone

The tree protection zone (TPZ), is a defined area (radius from trunk), within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. See *Tree Protection Guidelines & Restrictions – Appendix E.*

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City arborist or Project arborist. Straw wattle may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A*, which indicates the optimal Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions – Appendix G.*

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Root Disturbance Distance

No one can estimate and predict with absolute certainty what distance from a tree, a soil disturbance such as excavation for construction should be, to ensure it will not significantly affect tree stability or health. Or to what degree, (low, moderate or high), a tree might be impacted. There are simply too many variables involved that we cannot see or anticipate. However, three times the D.B.H. (diameter at breast height), is a widely accepted minimum used in the industry for root disturbance, *on one side of the trunk*, and is supported by several research studies including (Smiley, Fraedich & Hendrickson 2002, Bartlett Tree Research Laboratories). This distance is often used during the design and planning phases of a project in order to estimate root loss due to construction activities. This distance is a guideline only and should be increased for trees with significant leans, decay or other structural problems.

The ISA, International Society of Arboriculture- Root Management (2017) publication recommends, “cutting roots at a distance greater than six times the trunk diameter (DBH) minimizes the likelihood of affecting both health and stability. This recommendation is given further direction by the companion publication, A.N.S.I. (*American National Standard*) A300 (Part 8)- 2013 Root Management, when roots are cut in a *non-selective* manner, i.e. in a straight line on one side of a tree. It says, if the cutting is “within six times the trunk diameter (DBH), mitigation shall be recommended”. Further, A.N.S.I. recommends the “minimum distance from the trunk for root cutting should be adjusted according to trunk diameter, species tolerance to root loss, tree age, health and site condition”.

In general, root cutting that occurs at a distance less than six times the diameter of a tree should be undertaken by hand digging and hand (or Sawzall), root pruning. These methods help mitigate root loss impacts.

Construction Impacts to Protected Trees

Based on my site analysis a tree location map was created. Trees from location map were plotted on the conceptual site plan, Sheet A.1. Impacts to existing trees were evaluated based on plotted distance of trees to proposed buildings and infrastructure. Accuracy of tree location is plus or minus 10 feet.

The proposed eighteen-unit project will be built to the lot line, on the south perimeter. All trees along the southern side of the parcel will be highly impacted and their removal will be necessary. On the north and west perimeters, setbacks will average about 14 feet, (Image #8).



Image #8 – Conceptual site plan. Trees that may be retained (12 total), are shown as brown or red dots. An enlarged site plan can be found in Appendix E of this report.

Both root loss and canopy loss impacts will be high to most existing trees. Most trees will be within the building, or hardscape (roadway and parking) footprint, and their removal will be necessary.

Twelve trees not in the footprint, that may be retained, will have both root loss and canopy loss. These losses will be moderate to significant, depending on final staking location of foundations. If after staking is placed, the impacts are anticipated to be moderate, the trees can tolerate this loss and will require mitigation to reduce root loss impacts. Six of these trees are “ordinance size” oaks including T24, T25, T26, T39, T47 & T48.

Most of the largest “ordinance size”, coast live oak trees in good or fair condition including T107, T112, T122, T135, & T137 are within or very near the building footprint, will be significantly impacted, and their removal will be necessary.

Impact Level – Protected Trees

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close to the tree construction work occurs. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

Impact Rating

- Low - 0
- Moderate – 12 (*Moderate to High, impact not fully assessed*)
- High - 22

Protected Trees Recommended for Removal Due to Construction Impacts

Twenty - Six Trees –

T101, T102, T103, T105, T106, T107, T111, T112, T115, T119, T120, T121, T122, T123, T127, T128, T130, T135, T136, T137, T138, T152, T153, T154, 110-A (no tag, coast live oak), & 148-A (no, tag, unidentified species).

Note, the above trees are listed and categorized in the Tree Assessment Chart spreadsheet, Appendix A.

Mitigation Measures for Retained Trees

The trees retained on this project will require some or all the following methods to protect them from the impacts described above and to minimize root loss during the construction phases.

- Tree Protection Fencing (all trees).
- Hand trenching.
- Supervised root pruning.

Tree Replacement Requirements

The City of San Jose requires that trees that are removed be replaced. The section below describes replacement requirement.

13.32.110 - Action on a Permit.

C. The Director or the Planning Commission on appeal, if applicable, shall impose as a condition on the issuance of any permit for the removal of any tree the requirement that a suitable replacement tree or trees as determined by the Director or the Planning Commission on appeal be or cause to be provided, installed and maintained, at no cost to the City: on-site by the permittee; or if on-site replacement is not feasible, at another site within the City of San José in the manner determined by the Director or the Planning Commission on appeal.

D. The replacement tree requirement set forth in this Section shall be roughly proportionate to the tree replacement needed to alleviate and address the burdens and other impacts created by allowing the removal of the tree or trees under the permit.

E. On-site tree replacement shall include a requirement that any on-site replacement tree that fails within three years after planting shall be promptly replaced. Off-site replacement shall include similar assurance of longevity of the replacement tree(s).

Note: Trees greater than 12-inches diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

125 Kirk Avenue, San Jose

Tree Assessment Chart - Appendix A


Suitability for Preservation Ratings:

- Good:** Trees in good health and structural condition with potential for longevity on the site
- Fair:** Trees in fair health and/or with structural defects that may be reduced with treatment procedures
- Poor:** Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:


- RT:** Retain Tree
- RI:** Remove Due to Construction Impacts
- I.M.** Impacts Can Be Mitigated With Pre-Construction Treatments
- R.C.** Remove Due to Condition

Regulated Tree City of San Jose, Chapter 13:32 - Ordinance Size Tree - Any tree 12 inches or greater in diameter measured at 4.5 feet above grade. Multi-trunk is combined measurement of all trunks. Any tree regardless of size located on multifamily, commercial or industrial property. ☒


Tree #	Species	Trunk Diameter @ 54 inches a.g.	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet from trunk)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments	
T101	southern magnolia (<i>Magnolia grandiflora</i>)	16"	Yes	35'X20'	Good	Fair	Good	15'	High (Within grading limits)	R.I.		
T102	Italian cypress (<i>Cupressus sempervirens</i>)	18"	Yes	40'X10'	Good	Good	Good	14"	High (Within grading limits)	R.I.		
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125 Kirk Avenue, San Jose


Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet from trunk)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T103	Italian cypress	20"	Yes	45'X10'	Good	Good	Good	15'	High (Within grading limits)	R.I.	
T104	persimmon (<i>Diospyros kaki</i>)	8" AT 3' ABOVE GRADE	No	45'X10'	Good	Good	Good	10'	High (Within grading limits)	R.I.	
T105	plum (<i>Prunus spp.</i>)	5",5",4"	Yes	15'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T106	plum	5",5",4"	Yes	15'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T107	coast live oak (<i>Quercus agrifolia</i>)	24",20"	Yes	45'X35'	Good	Good	Good	18'	High (Within grading limits)	R.I.	Co-dominant trunks at 3' above grade.
T108	coast live oak	6"	No	15'X5'	Good	Fair	Good	5'	High (Within grading limits)	R.I.	
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T109	coast live oak	8"	No	35'X10'	Good	Good	Good	6'	High (Within grading limits)	R.I.	
T110	coast live oak	5"	No	15'X5'	Good	Good	Good	5'	High (Within grading limits)	R.I.	
110-A No Tag	coast live oak	18"	Yes	35'x15'	Fair	Fair	Fair	14'	High (Within grading limits)	R.I.	
T111	coast live oak	6",6",6",6"	Yes	20'X15'	Good	Fair	Good	12'	High (Within grading limits)	R.I.	Co-dominant trunks at 1' above grade.
T112	coast live oak	20"	Yes	40'X15'	Fair	Fair	Fair	15'	High (Within grading limits)	R.I.	
T113	coast live oak	3"	No	15'X5'	Fair	Fair	Fair	5'	High (Within grading limits)	R.I.	
T114	coast live oak	4"	No	10'X10'	Good	Fair	Good	5'	High (Within grading limits)	R.I.	
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T115	valley oak (<i>Quercus lobata</i>)	4",4",3"	Yes	30'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	Co-dominant trunks at grade.
T116	coast live oak	10"	No	25'X15'	Good	Good	Good	10'	High (Within grading limits)	R.I.	
T117	walnut (<i>Julgans spp.</i>)	10"	No	15'X10'	Poor	Poor	Poor	10'	High (Within grading limits)	R.I., R.C.	Over-mature walnut with several dead stumps. One live 9" trunk.
T118	valley oak	9"	No	30'x15'	Fair-Poor	Fair	Poor	10'	High (Within grading limits)	R.I., R.C.	Ivy grows up entire tree.
T119	glossy privet (<i>Ligustrum lucidum</i>)	8",8"	Yes	25'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T120	unidentified species	24"	Yes	15'X15'	Poor	Poor	Poor	N/A	Moderate (Root loss)	R.C.	Dead
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T121	unidentified species	24"	Yes	10'X10'	Poor	Poor	Poor	N/A	Moderate (Root loss)	R.C.	Dead
T122	coast live oak	40",24"	Yes	40'X50'	Good	Fair	Good	20'	High (Within grading limits)	R.I.	
T123	valley oak	19"	Yes	40'X20'	Fair-Poor	Fair	Poor	15'	High (Within grading limits)	R.I.,R.C.	Thin canopy density.
T124	coast live oak	16",10"	Yes	35'X20'	Fair	Fair	Fair	12'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes. Co-dominant trunks at 4' above grade.
T125	coast live oak	16"	Yes	25'X10'	Fair	Poor	Fair	12'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes. Topped at 10' above grade.
T126	coast live oak	22"	Yes	45'X15'	Fair	Fair	Fair	15'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Ordinance Size Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T127	walnut	14"	Yes	15'X15'	Poor	Poor	Poor	N/A	High (Within grading limits)	R.I.,R.C.	In significant decline.
T128	walnut (<i>Julgans spp.</i>)	18",16",16"	Yes	45'X20'	Poor	Poor	Poor	N/A	High (Within grading limits)	R.I.,R.C.	In significant decline.
T129	fan palm (<i>Washingtonia spp.</i>)	16"	Yes (Unsuitable species)	50'X5'	Good	Good	Good	10'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
T130	coast live oak	11",11"	Yes	40'X25'	Good	Good	Good	15'	High (Within grading limits)	R.I.	
T131	coast live oak	8"	No	35'X15'	Fair	Fair	Fair	12'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
T132	coast live oak	6"	No	20'X10'	Good	Poor	Poor	10'	High (Within grading limits)	R.I.,R.C.	
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Ordinance Size Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T133	coast live oak	8"	No	10'X10'	Fair	Poor	Poor	10'	High (Within grading limits)	R.I.,R.C.	Trunk bows to 90 degrees at 5' above grade.
T134	coast live oak	6",4"	No	10'X5'	Fair	Poor	Fair	10'	High (Within grading limits)	R.I.	
T135	coast live oak	17"	Yes	15'X15'	Fair	Fair	Fair	12'	High (Within grading limits)	R.I.	
T136	valley oak	21"	Yes	20'X10'	Poor	Poor	Poor	N/A	High (Within grading limits)	R.I.,R.C.	
T137	coast live oak	38"	Yes	50'X35'	Good	Good	Good	22'	High (Within grading limits)	R.I.	Canopy overhangs adjacent property 15'
T138	coast live oak	18"	Yes	25'X10'	Fair	Poor	Fair	12'	High (Within grading limits)	R.I.	Trunk bows to 45 degrees at 10' above grade.
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125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T139	valley oak	22"	Yes	45'X25'	Fair-Poor	Fair	Fair	15'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes. Significant tip dieback.
T140	coast live oak	6"	No	20'X10'	Fair	Fair	Fair	10'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
T141	glossy privet	8"	No	20'X10'	Fair-Poor	Fair	Poor	10'	Moderate (Root loss)	R.C.	Canopy overhangs adjacent property 5'
T142	glossy privet	10",8",6"	Yes	25'X15'	Fair	Fair	Fair	10'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes. Canopy overhangs adjacent property 5'
T143	coast live oak	6"	No	20'X5'	Fair	Poor	Poor	10'	Moderate (Root loss)	,R.C.	Canopy overhangs adjacent property 10'
T144	coast live oak	9"	No	25'X10'	Fair	Poor	Poor	10'	Moderate (Root loss)	R.C.	Canopy overhangs adjacent property 5'
 <p>Kurt Fouts Arborist Consultant</p> <p>826 Monterey Avenue Capitola, CA 95010 831-359-3607 kurtfouts1@outlook.com</p>							Page 8 of 10			12/7/2021	

125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T145	coast live oak	5"	No	20'X5'	Fair	Fair	Fair	10'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
T146	coast live oak	4"	No	20'X5'	Fair	Fair	Fair	7'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
T147	coast live oak	15"	Yes	40'X25'	Fair	Fair	Fair	13'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.Canopy overhangs adjacent property 15'. Unbalanced canopy. Trunk bows at 10' above grade.
T148	coast live oak	12"	Yes	30'X10'	Fair	Fair	Fair	10'	Moderate to High (Root loss)	R.T.	Impact assessment after placement of foundation grading stakes.
148-A No Tag	unidentified species	30"	Yes	5X5	Poor	Poor	Poor	N/A	High (Within grading limits)	R.I.,R.C.	Dead
T149	coast live oak	6"	No	15'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T150	plum	10"	No	10'X10'	Poor	Poor	Poor	10'	High (Within grading limits)	R.I.,R.C.	
							Page 9 of 10	12/7/2021			

125 Kirk Avenue, San Jose
Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T151	persimmon	11"	No	15'X15'	Good	Good	Good	10'	High (Within grading limits)	R.I.	
T152	apricot (<i>Prunus spp.</i>)	10",8",6"	Yes	10'X15'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T153	plum	8",6",6"	Yes	10'X10'	Poor	Poor	Poor	N/A	High (Within grading limits)	R.I.,R.C.	
T154	fig (<i>Ficus carica</i>)	10",10",9"	Yes	10'X20'	Good	Good	Good	10'	High (Within grading limits)	R.I.	
T155	lemon or orange (<i>Citrus spp.</i>)	4",4",3"	No	10'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
T156	lemon or orange (<i>Citrus spp.</i>)	4",3"	No	10'X10'	Fair	Fair	Fair	10'	High (Within grading limits)	R.I.	
 <p>Kurt Fouts Arborist Consultant 826 Monterey Avenue Capitola, CA 95010 831-359-3607 kurtfouts1@outlook.com</p>							Page 10 of 10			12/7/2021	

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A*.

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

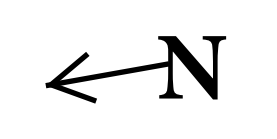
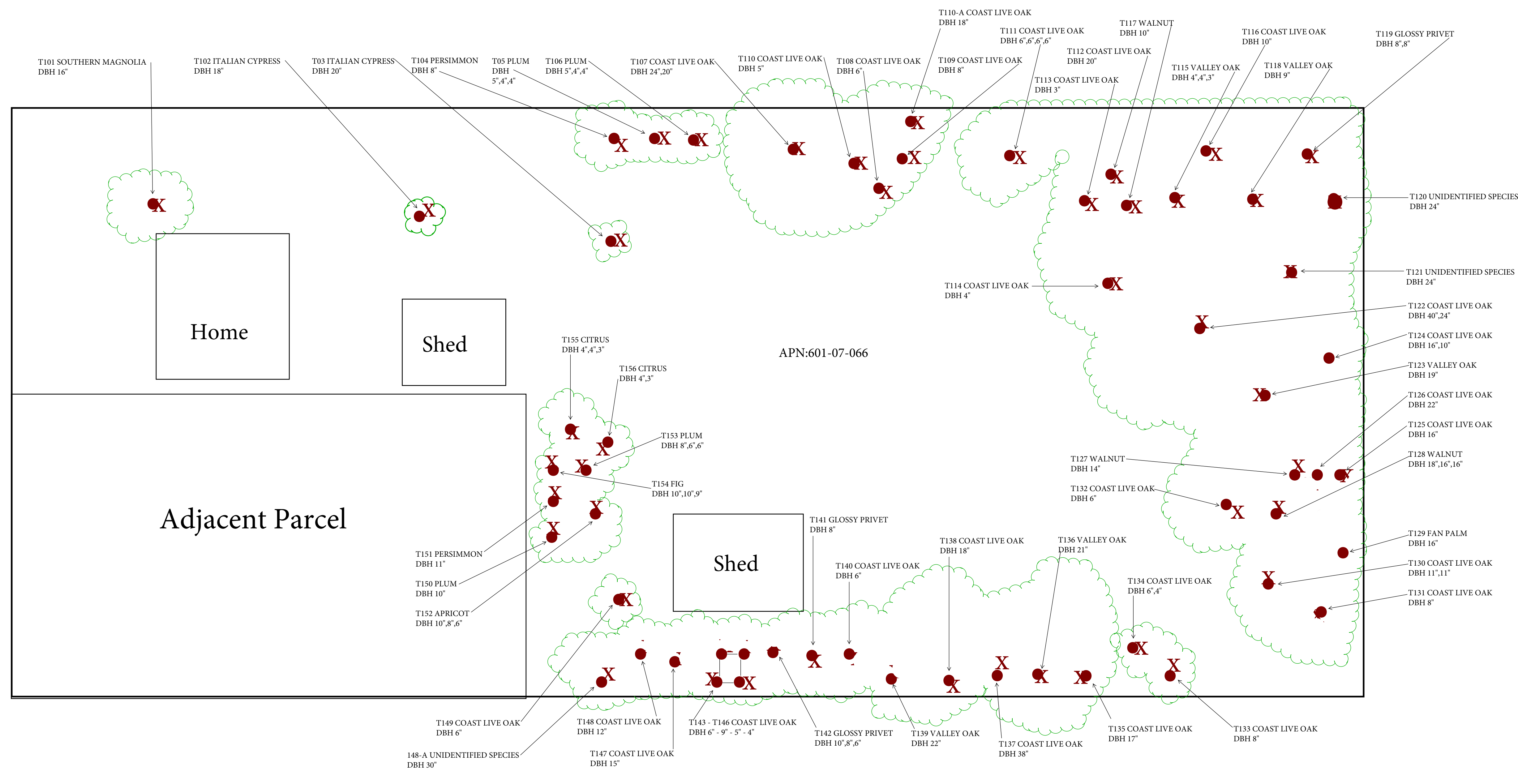
None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

Legend

- Tree Location 
- Tree Protection Fencing 
- Tree Canopy Extents 
- Hand Trenching & Root Pruning 
- Remove Tree 



Scale: 1" = 40'

Kirk Avenue

Adjacent Parcel

Home

Shed

Shed

APN:601-07-066



KIRK AVENUE (80' WIDE)

PROJECT DESIGNER:
 DE NGUYEN

THE DESIGN AND DEVELOPMENT GROUP EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF TDDG, INC. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE DESIGN AND DEVELOPMENT GROUP HARMLESS.

NO.	DATE	REVISION
1	11/15/21	PD ZONING & PERMIT

Project Name:
**125 KIRK AVE
 SAN JOSE, CA**

SITE DEVELOPMENT PLAN
 SCALE: 1/16"=1'-0"

CONCEPTUAL PLAN - NOT FOR CONSTRUCTION

DATE:	10/01/21	Sheet Number:
JOB NO.:	2021-24	A.1
SCALE:	AS SHOWN	
DRAWN BY:	MP	
Project No.:		2021

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Glossary of Terms

Basal rot: decay of the lower trunk, trunk flare, or buttress roots.

Canker: Localized diseased area on stems, roots and branches. Often sunken and discolored.

Critical Root Zone (CRZ): Area of soil around a tree where a minimum number of roots considered critical to the structural stability or health of the tree are located. CRZ determination is sometimes based on the drip line or a multiple of the DBH, but because root growth can be asymmetric due to site conditions, on-site investigation may be required.

Codominant branches/stems: Forked branches (or trunks), nearly the same size in diameter, arising from a common junction and lacking a normal branch union, may have included bark.

Crown: Upper part of a tree, measured from the lowest branch, including all branches and foliage.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measurement of trunk diameter at 4.5 feet above grade.

Frass: Fecal material and/or wood shavings produced by insects.

Included Bark Attachments (crotches): Branch/limb or limb /trunk, or codominant trunks originating at acute angles from each other. Bark remains between such crotches, preventing the development of axillary wood. The inherent weakness of such attachments increases with time, through the pressure of opposing growth and increasing weight of wood and foliage, often resulting in failure.

Live Crown Ratio (LCR): Ratio of the the crown length (live foliage), to total tree height.

Scaffold branches: Permanent or structural branches that form the scaffold architecture or structure of a tree.

Suppressed: Trees that have been overtopped and occupy an understory position within a group or grove of trees. Suppressed trees often have poor structure.

Tree Protection Zones (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Trunk flare: Transition zone from trunk to roots where the trunk expands into the buttress or structural roots.

This Glossary of Terms was adapted from the *Glossary of Arboricultural Terms* (ISA, 2015)

Appendix H - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

- 1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
- 2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- 3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.
- 4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.
- 5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- 6) Compaction of the soil within the tree protection zone shall be avoided.
- 7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.
- 8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.
- 9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.
- 10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six-foot chain link fence mounted on eight-foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of San Jose – Protected Tree

Ordinance-Size Trees

An ordinance-size tree on private property is either:

Single Trunk – 38 inches or more in circumference at 4.5 feet above ground, or

Multi-Trunk – The combined measurements of each trunk circumference, at 4.5 feet above ground, add up to 38 inches or more in circumference.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

